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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,622	05/02/2001	Manfred Horstmann	2000.064200	5606

7590 10/23/2002

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EXAMINER'

FENTY, JESSE A

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/847,622

Applicant(s)

HORSTMANN ET AL.

Examiner

Jesse A. Fenty

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-31,33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 10-26 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 4-9 is/are allowed.
- 6) ☒ Claim(s) 27-31, 33, 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 27-31, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaguchi et al. (U.S. Patent No. 5,144,393).

In re claim 27, Yamaguchi discloses a semiconductor device, comprising:

A substrate (41);

A gate insulation layer (48) formed above said substrate; and

A gate electrode (52) formed above said gate insulation layer, said gate electrode having an upper portion comprised of polysilicon (column 8, lines 63-65) and a lower portion, said upper portion having a plurality of extensions formed thereon, said extension of said upper portion extending laterally beyond said lower portion of said gate electrode.

In re claim 28, Yamaguchi discloses the device of claim 27, further comprising an insulating material (44) positioned adjacent said lower portion of said gate electrode and under said extensions formed on said upper portion.

In re claim 29, Yamaguchi discloses the device of claim 27, wherein said substrate is comprised of silicon (column 7, line 59).

In re claim 30, Yamaguchi discloses the device of claim 27, wherein said gate insulation layer is comprised of silicon dioxide (column 8, lines 51-53).

In re claim 31, Yamaguchi discloses the device of claim 27, wherein said lower portion of said gate electrode is comprised of polysilicon.

In re claim 33, Yamaguchi discloses the device of claim 27, wherein said extensions are comprised of polysilicon.

In re claim 34, Yamaguchi discloses the device of claim 27, wherein said upper portion of said gate electrode and said extensions have a combined lateral dimension that is approximately 5-100 percent greater than a lateral dimension of said lower portion of said gate electrode.

Allowable Subject Matter

3. Claims 1, 2 and 4-9 are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter:
The claimed transistor device comprising, but not limited to, a gate electrode formed above a gate insulation layer, said gate electrode having a middle portion located over an active region, said middle portion having an extension of an upper part along the gate length direction that decreases from bottom to top of the upper part is neither anticipated nor obvious over the prior art of record

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Response to Arguments

5. Applicant's arguments with respect to claims 27-34 have been considered but are moot in view of the new ground(s) of rejection.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse A. Fenty whose telephone number is 703-308-8137. The examiner can normally be reached on 5/4-9 1st Fri. Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 703-308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-746-3892 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Jesse A. Fenty
Examiner
Art Unit 2815

JAF
October 16, 2002


GEORGE ECKERT
PRIMARY EXAMINER